ID: Type: **Oral**

coherent ambient noise in the North Atlantic and Barents sea regions

The ability of the International Monitoring System (IMS) network to detect atmospheric explosions and events of interest strongly depends on station-specific ambient noise signatures. Around 0.2 Hz, a persistent source of signals that radiate microbaroms over spatially extended regions is generated by the second order non-linear interaction of ocean waves, mostly during severe storms. A two-dimensional energy spectrum ocean wave model accounting for bathymetry and source directivity effects is used to build a global reference database of oceanic noise sources. Classical broadband array processing method and conventional beamforming approach have been implemented on multi-year continuous IMS recordings. To evaluate the source model at regional scales, comparisons between the observed and modeled directional microbarom amplitudes are carried out at station IS37 in Norway. Metrics are defined to further evaluate the capability of the developed source and propagation models to characterize continuous active source regions in the North Atlantic and Barents sea.

Primary author: LE PICHON, Alexis (CEA/CENTRE Ile-de-France)

Presenter: LE PICHON, Alexis (CEA/CENTRE Ile-de-France)

Track Classification: Modelling and Network Processing